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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,434	07/10/2003	Kah-Ong Tan	59565(71987)	5609
7590	11/20/2006		EXAMINER	
Mr. Peter F. Corless EDWARDS & ANGELL, LLP 101 Federal Street Boston, MA 02110-1800			SELBY, GEVELL V	
		ART UNIT	PAPER NUMBER	
		2622		

DATE MAILED: 11/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/618,434	TAN ET AL.
	Examiner	Art Unit
	Gevell Selby	2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barman et al., US 6,392688, in view of Meek et al., US 6,741,286.**

In regard to claim 1, Barman et al., US 6,392688, discloses a digital image capturing module assembly, which comprises:

a lens holder (see figure 3, element 52), which has one side defined as a focusing plane, and which is formed with a plurality of aligning posts (see figure 3, elements 30) on the periphery of the focusing plane (see column 4, lines 10-29 and column 5, lines 28-35); and

a photosensitive printed circuit board (see figure 5, elements 16A and 18), which is formed with a plurality of aligning holes (see figure 4, elements 12) corresponding to the aligning posts on the lens holder (column 5, lines 28-35),

wherein the respective tips of the aligning posts on the lens holder are each melted into a bolting structure to secure the photosensitive printed circuit board firmly in position on the lens holder; and

wherein the firmly-secured photosensitive printed circuit board forcefully presses against the washer to thereby allow the washer to provide a sealed light-

impenetrable effect at the junction between the photosensitive printed circuit board and the lens holder (see column 5, line 53 to column 6, line 8; the posts or screws 30 can be welded to lens holder or rigid mounting member 52).

The Barman reference does not disclose a washer, which is mounted on the periphery of the focusing plane of the lens holder; a photosensitive printed circuit board which is mounted on the washer on the lens holder by fitting the aligning holes thereof to the aligning posts on the lens holder.

Meek et al., US 6,741,286, discloses a camera with an image sensor 12 overlaid by a neoprene washer 13 with an aperture 14 lined up with the imaging area on the sensor and a lens assembly placed in front of the image sensor, abutting and sealing with the washer (see column 2, lines 3-15).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Barman et al., US 6,392,688, in view of Meek et al., US 6,741,286, to have a washer, which is mounted on the periphery of the focusing plane of the lens holder; a photosensitive printed circuit board which is mounted on the washer on the lens holder by fitting the aligning holes thereof to the aligning posts on the lens holder, in order to seal the lens assembly and image sensor together to prevent the image sensor from being contaminated.

In regard to claim 2, Barman et al., US 6,392,688, in view of Meek et al., US 6,741,286, discloses the digital image capturing module assembly of claim 1. The Barman reference discloses wherein the photosensitive printed circuit board is a CCD-based photosensitive printed circuit board (see column 3, lines 14-16).

In regard to claim 4, Barman et al., US 6,392688, in view of Meek et al., US 6,741,286, discloses the digital image capturing module assembly of claim 1, wherein the washer is made of rubber (see column 2,lines 35-39).

In regard to claim 5, Barman et al., US 6,392688, in view of Meek et al., US 6,741,286, discloses the digital image capturing module assembly of claim 1. It is implied that the washer of the Barman in view of Meek reference is formed with a plurality of aligning holes which are fitted to the aligning posts on the lens holder to help the washer secured in position on the lens holder because the aligning posts or screws 30 would go through the washer to screw into the lens holder

In regard to claim 6, Barman et al., US 6,392688, discloses method for fabricating a digital image capturing module, comprising:

preparing a lens holder which has one side defined as a focusing plane, and which is formed with a plurality of aligning posts on the periphery of the focusing plane;

preparing a photosensitive printed circuit board which is formed with a plurality of aligning holes corresponding to the aligning posts on the lens holder;

melting the respective tips of the aligning posts on the lens holder so as to transform the respective tips of the aligning posts into a bolting structure to secure the photosensitive printed circuit board in position on the lens holder.

The Barman reference does not disclose mounting a washer on the periphery of the focusing plane of the lens holder; mounting the photosensitive printed circuit board in position on the washer on the lens holder by fitting the aligning holes in the

photosensitive printed circuit board to the aligning posts on the lens holder, as well as to allow the photosensitive printed circuit board to forcefully presses against the washer to thereby allow the washer to provide a sealed light-impenetrable effect at the junction between the photosensitive printed circuit board and the lens holder.

Meek et al., US 6,741,286, discloses a camera with an image sensor 12 overlaid by a neoprene washer 13 with and aperture 14 lined up with the imaging area on the sensor and a lens assembly placed aligned in front of the image sensor, abutting and sealing with the washer as well as to allow the photosensitive printed circuit board to forcefully presses against the washer to thereby allow the washer to provide a sealed light-impenetrable effect at the junction between the photosensitive printed circuit board and the lens holder (see column 2, lines 3-15).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Barman et al., US 6,392,688, in view of Meek et al., US 6,741,286, to have the steps of mounting a washer on the periphery of the focusing plane of the lens holder; and mounting the photosensitive printed circuit board in position on the washer on the lens holder by fitting the aligning holes in the photosensitive printed circuit board to the aligning posts on the lens holder, as well as to allow the photosensitive printed circuit board to forcefully presses against the washer to thereby allow the washer to provide a sealed light-impenetrable effect at the junction between the photosensitive printed circuit board and the lens holder, in order to seal the lens assembly and image sensor together to prevent the image sensor from being contaminated.

In regard to claim 7, Barman et al., US 6,392688, in view of Meek et al., US 6,741,286, discloses the method of claim 6. The Barman reference discloses wherein the photosensitive printed circuit board is a CCD-based photosensitive printed circuit board (see column 3, lines 14-16).

In regard to claim 9, Barman et al., US 6,392688, in view of Meek et al., US 6,741,286, discloses the method of claim 6. The barman reference discloses wherein the washer is made of rubber (see column 2,lines 35-39).

In regard to claim 10, Barman et al., US 6,392688, in view of Meek et al., US 6,741,286, discloses the method of claim 6. It is implied that the washer of the Barman in view of Meek reference is formed with a plurality of aligning holes which are fitted to the aligning posts on the lens holder to help the washer secured in position on the lens holder because the aligning posts or screws 30 would go through the washer to screw into the lens holder.

In regard to claim 3 and 8, Barman et al., US 6,392688, in view of Meek et al., US 6,741,286, discloses the digital image capturing module assembly and method of claims 1 and 6, respectively. The Barman and Meek reference do not disclose wherein the aligning posts on the lens holder are made of plastics.

Official Notice is taken that is well known to one of ordinary skill in the art to make the posts or screws that align and secure the lens holder in place out plastics, in order to make the apparatus lightweight and less susceptible to the environment.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,693,674, discloses an image pickup device with lens holder with aligning posts going through the circuit board of the image sensor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 571-272-7369. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on 571-272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gvs



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